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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/320,349	05/26/1999	DONALD SCOTT WEDGE	019474-00010	4586

24394 7590 01/30/2007  
LARIVIERE, GRUBMAN & PAYNE, LLP  
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MONTEREY, CA 93940

EXAMINER
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SWERDLOW, DANIEL

ART UNIT	PAPER NUMBER
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2615

MAIL DATE	DELIVERY MODE
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01/30/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Interview Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/320,349	WEDGE, DONALD SCOTT	
	<b>Examiner</b>	<b>Art Unit</b>	
	Daniel Swerdlow	2615	

All participants (applicant, applicant's representative, PTO personnel):

(1) Daniel Swerdlow. (3)\_\_\_\_\_.

(2) Mr. Brent Capehart, reg. no. 39,620. (4)\_\_\_\_\_.

Date of Interview: 24 January 2007.

Type: a) ☒ Telephonic b) ☐ Video Conference  
c) ☐ Personal [copy given to: 1) ☐ applicant 2) ☐ applicant's representative]

Exhibit shown or demonstration conducted: d) ☐ Yes e) ☒ No.  
If Yes, brief description: \_\_\_\_\_.

Claim(s) discussed: 1,7,14,18,23 and 24.

Identification of prior art discussed: Techniques by Begault et al., US Patent 5,438,623 to Begault.

Agreement with respect to the claims f) ☒ was reached. g) ☐ was not reached. h) ☐ N/A.

Substance of Interview including description of the general nature of what was agreed to if an agreement was reached, or any other comments: Amendments detailed in the attachment would result in patentability.

(A fuller description, if necessary, and a copy of the amendments which the examiner agreed would render the claims allowable, if available, must be attached. Also, where no copy of the amendments that would render the claims allowable is available, a summary thereof must be attached.)

THE FORMAL WRITTEN REPLY TO THE LAST OFFICE ACTION MUST INCLUDE THE SUBSTANCE OF THE INTERVIEW. (See MPEP Section 713.04). If a reply to the last Office action has already been filed, APPLICANT IS GIVEN A NON-EXTENDABLE PERIOD OF THE LONGER OF ONE MONTH OR THIRTY DAYS FROM THIS INTERVIEW DATE, OR THE MAILING DATE OF THIS INTERVIEW SUMMARY FORM, WHICHEVER IS LATER, TO FILE A STATEMENT OF THE SUBSTANCE OF THE INTERVIEW. See Summary of Record of Interview requirements on reverse side or on attached sheet.

Examiner Note: You must sign this form unless it is an Attachment to a signed Office action.

  
\_\_\_\_\_  
Examiner's signature, if required

## Summary of Record of Interview Requirements

### Manual of Patent Examining Procedure (MPEP), Section 713.04, Substance of Interview Must be Made of Record

A complete written statement as to the substance of any face-to-face, video conference, or telephone interview with regard to an application must be made of record in the application whether or not an agreement with the examiner was reached at the interview.

#### Title 37 Code of Federal Regulations (CFR) § 1.133 Interviews

##### Paragraph (b)

In every instance where reconsideration is requested in view of an interview with an examiner, a complete written statement of the reasons presented at the interview as warranting favorable action must be filed by the applicant. An interview does not remove the necessity for reply to Office action as specified in §§ 1.111, 1.135. (35 U.S.C. 132)

#### 37 CFR § 1.2 Business to be transacted in writing.

All business with the Patent or Trademark Office should be transacted in writing. The personal attendance of applicants or their attorneys or agents at the Patent and Trademark Office is unnecessary. The action of the Patent and Trademark Office will be based exclusively on the written record in the Office. No attention will be paid to any alleged oral promise, stipulation, or understanding in relation to which there is disagreement or doubt.

The action of the Patent and Trademark Office cannot be based exclusively on the written record in the Office if that record is itself incomplete through the failure to record the substance of interviews.

It is the responsibility of the applicant or the attorney or agent to make the substance of an interview of record in the application file, unless the examiner indicates he or she will do so. It is the examiner's responsibility to see that such a record is made and to correct material inaccuracies which bear directly on the question of patentability.

Examiners must complete an Interview Summary Form for each interview held where a matter of substance has been discussed during the interview by checking the appropriate boxes and filling in the blanks. Discussions regarding only procedural matters, directed solely to restriction requirements for which interview recordation is otherwise provided for in Section 812.01 of the Manual of Patent Examining Procedure, or pointing out typographical errors or unreadable script in Office actions or the like, are excluded from the interview recordation procedures below. Where the substance of an interview is completely recorded in an Examiners Amendment, no separate Interview Summary Record is required.

The Interview Summary Form shall be given an appropriate Paper No., placed in the right hand portion of the file, and listed on the "Contents" section of the file wrapper. In a personal interview, a duplicate of the Form is given to the applicant (or attorney or agent) at the conclusion of the interview. In the case of a telephone or video-conference interview, the copy is mailed to the applicant's correspondence address either with or prior to the next official communication. If additional correspondence from the examiner is not likely before an allowance or if other circumstances dictate, the Form should be mailed promptly after the interview rather than with the next official communication.

The Form provides for recordation of the following information:

- Application Number (Series Code and Serial Number)
- Name of applicant
- Name of examiner
- Date of interview
- Type of interview (telephonic, video-conference, or personal)
- Name of participant(s) (applicant, attorney or agent, examiner, other PTO personnel, etc.)
- An indication whether or not an exhibit was shown or a demonstration conducted
- An identification of the specific prior art discussed
- An indication whether an agreement was reached and if so, a description of the general nature of the agreement (may be by attachment of a copy of amendments or claims agreed as being allowable). Note: Agreement as to allowability is tentative and does not restrict further action by the examiner to the contrary.
- The signature of the examiner who conducted the interview (if Form is not an attachment to a signed Office action)

It is desirable that the examiner orally remind the applicant of his or her obligation to record the substance of the interview of each case. It should be noted, however, that the Interview Summary Form will not normally be considered a complete and proper recordation of the interview unless it includes, or is supplemented by the applicant or the examiner to include, all of the applicable items required below concerning the substance of the interview.

A complete and proper recordation of the substance of any interview should include at least the following applicable items:

- 1) A brief description of the nature of any exhibit shown or any demonstration conducted,
- 2) an identification of the claims discussed,
- 3) an identification of the specific prior art discussed,
- 4) an identification of the principal proposed amendments of a substantive nature discussed, unless these are already described on the Interview Summary Form completed by the Examiner,
- 5) a brief identification of the general thrust of the principal arguments presented to the examiner,  
(The identification of arguments need not be lengthy or elaborate. A verbatim or highly detailed description of the arguments is not required. The identification of the arguments is sufficient if the general nature or thrust of the principal arguments made to the examiner can be understood in the context of the application file. Of course, the applicant may desire to emphasize and fully describe those arguments which he or she feels were or might be persuasive to the examiner.)
- 6) a general indication of any other pertinent matters discussed, and
- 7) if appropriate, the general results or outcome of the interview unless already described in the Interview Summary Form completed by the examiner.

Examiners are expected to carefully review the applicant's record of the substance of an interview. If the record is not complete and accurate, the examiner will give the applicant an extendable one month time period to correct the record.

#### Examiner to Check for Accuracy

If the claims are allowable for other reasons of record, the examiner should send a letter setting forth the examiner's version of the statement attributed to him or her. If the record is complete and accurate, the examiner should place the indication, "Interview Record OK" on the paper recording the substance of the interview along with the date and the examiner's initials.

### **Proposed Examiner's Amendment**

This listing of claims will replace all prior versions, and listings, of claims in the application.

Markup is made with respect to the amendment filed on 13 November 2006.

#### **Listing of Claims:**

Claim 1 (currently amended): A method for listening to simultaneous audio signals, the method comprising:

receiving a first audio signal from a first source;

adding only a first differentiation cue to the first audio signal to produce a first stereo signal having a right first audio signal and a left first audio signal;

receiving a second audio signal from a second source;

producing a second stereo signal having a right second audio signal and a left second audio signal from said second audio signal;

providing the right first audio signal and right second audio signal to a right audio transducer; and

providing the left first audio signal and the left second audio signal to a left audio transducer;

wherein said first differentiation cue consists of an amplitude difference of at least 3 dB between the right first audio signal and the left first audio signal and provides differentiation to allow a listener to simultaneously hear and understand said first and second audio signals without degradation to the intelligibility of said signals; and

wherein at least one of said sources does not have any capability to receive any of said stereo signals.

Claims 2-6 (cancelled).

Claim 7 (currently amended): A communication system comprising:

a first audio input configured to receive a first monaural audio signal from a first source;

a second audio input configured to receive a second monaural audio signal from a second source;

a first differentiation block coupled to the first audio input and providing only a fixed first differentiation cue in the form of only an amplitude difference of at least 3 dB to the first audio input to create ~~a having~~ a first right channel and a first left channel;

a second differentiation block coupled to the second audio input and providing a second differentiation cue to the second audio input to create a second right channel and second left channel;

a left channel summer combining the first left channel and the second left channel to produce a left channel output; and

a right channel summer combining the first right channel and the second right channel to produce a right channel output;

wherein said first differentiation cue provides differentiation to allow a listener to simultaneously hear and understand said first and second audio signals without degradation to the intelligibility of said signals; and

wherein one of said sources does not have any capability to receive any of said left channel or right channel outputs.

Claims 8-13 (canceled).

Claim 14 (previously presented): A method for listening to simultaneous audio information, the method comprising:

providing a first monaural audio signal from a first source;

adding only a first differentiation cue in the form of only an amplitude difference of at least 3 dB to the first monaural audio signal to produce a first stereo signal having a left signal and a right signal;

providing a second audio signal from a second source, the second audio signal being at least partially simultaneous with the first monaural audio signal;

coupling the left signal, the right signal, and the second audio signal to a stereo transducer;

wherein said first differentiation cue provides differentiation to allow a listener to simultaneously hear and understand said first and second audio signals without degradation to the intelligibility of said signals;

wherein said cues are added independent of any positional information corresponding to said audio signals; and

wherein one of said sources does not have any capability to receive any of said stereo signals.

Claims 15-17 (cancelled).

Claim 18 (currently amended): An apparatus for listening to a plurality of contemporaneous radio transmissions, the apparatus comprising:

- a plurality of front microphone inputs, including a first microphone input and a second microphone input for producing a front microphone signal;

- a first differentiation block for adding a first differentiation cue consisting only of one of an amplitude difference of at least 3dB and a differential spectral filtering to said front microphone signal to provide a first stereo signal having a front right channel signal and a front left channel signal;

- a right summer for receiving said front right channel signal;

- a left summer for receiving said front left channel signal;

- at least one of a plurality of navigation and/or annunciator inputs for providing an annunciator signal;

- a third differentiation block for adding a third differentiation cue consisting only of one of an amplitude difference of at least 3dB and a differential spectral filtering to said annunciator signal to provide a differentiated signal to said right summer and said left summer;

- a fourth differentiation block for adding a fourth differentiation cue consisting only of one of an amplitude difference of at least 3dB and a differential spectral filtering to a first communication input signal (Com I) to provide a differentiated signal to said right summer and said left summer;

- a fifth differentiation block for adding a fifth differentiation cue consisting only of one of an amplitude difference of at least 3dB and a differential spectral filtering to a second

communication input signal (Com2) to provide a differentiated signal to said right summer and said left summer;

a left output channel for providing a summed output signal from said left summer; and

a right output channel for providing a summed output signal from said right summer,

wherein, said differentiation cues differ from one another to allow a listener to simultaneously hear and understand said signals without degradation to the intelligibility of said signals.

Claim 19 (original): The apparatus of claim 18 further comprising:

a summer for summing said first and said second microphone inputs to produce said front microphone signal.

Claim 20 (currently amended): The apparatus of claim 18 further comprising:

a plurality of back microphone inputs, including a third microphone input and a fourth microphone input, for producing a back microphone signal;

a differentiation block for adding a second differentiation cue consisting only of one of an amplitude difference of at least 3dB and a differential spectral filtering to said back microphone signal to provide a back right channel signal to said right summer and a back left channel signal to said left summer.



Claim 21 (original): The apparatus of claim 20 further comprising:

a summer for summing said third and said fourth microphone inputs to produce said back microphone signal.

Claim 22 (original): The apparatus of claim 18 further comprising:

an input for an automatically mutable stereo entertainment system for providing a first input to said left summer and a second input to said right summer.

Claim 23 (currently amended): An apparatus configured to modify radio signals between an avionics panel in an airplane and a stereo headset, comprising:

- a first audio input configured to receive a first monaural audio signal from a first source;

- a second audio input configured to receive a second monaural audio signal from a second source;

- a first differentiation block coupled to the first audio input and providing a first fixed differentiation cue in the form of only an amplitude difference of at least 3 dB to the first audio input to create a first right channel and a first left channel;

- a second differentiation block coupled to the second audio input and providing a second fixed differentiation cue in the form of only an amplitude difference of at least 3 dB to the second audio input to create a second right channel and a second left channel;

- a left channel summer combining the first left channel and the second left channel to produce a left channel output; and

- a right channel summer combining the first right channel and the second right channel to produce a right channel output;

wherein said first differentiation cue provides differentiation to allow a listener to simultaneously hear and understand said first and second audio signals without degradation to the intelligibility of said signals; and

wherein one of said sources does not have any capability to receive any of said left channel or right channel outputs.

Claim 24 (currently amended): A method for listening to simultaneous audio signals, the method comprising:

receiving a first audio signal from a first source;

adding only a first differentiation cue in the form of only a differential ~~time-delay~~ spectral filtering to the first audio signal to produce a first stereo signal having a right first audio signal and a left first audio signal;

receiving a second audio signal from a second source; producing a second stereo signal having a right second audio signal and a left second audio signal from said second audio signal;

providing the right first audio signal and right second audio signal to a right audio transducer; and

providing the left first audio signal and the left second audio signal to a left audio transducer;

wherein said first differentiation cue provides differentiation to allow a listener to simultaneously hear and understand said first and second audio signals without degradation to the intelligibility of said signals; and

wherein one of said sources does not have any capability to receive any of said stereo signals.

Claims 25-27 (cancelled).

Claim 28 (previously presented): The communication system of Claim 7, being further defined as having said second monaural audio signal being produced by a microphone coupled to the communication system.

Claim 29 (previously presented): The communication system of Claim 7, being further defined as having said first monaural audio signal being provided from a radio receiver.

Claim 30 (previously presented): The communication system of Claim 29, further comprising:  
a microphone coupled to the communication system and, the microphone producing a third audio signal coupled to a third differentiation block, the third differentiation block providing a third differentiation cue to the third signal to produce a third left channel and a third right channel, the third left channel being coupled to the left channel summer and the third right channel being coupled to the right channel summer.

Claim 31 (previously presented): The communication system of Claim 29, further comprising:  
a detector coupled to the radio receiver, the detector coupled to a switch disposed between the second audio input and the left channel summer and the right channel summer, the switch being responsive to a detection signal produced by the detector and opening when a signal is detected.

Claim 32 (previously presented): The communication system of Claim 7, further comprising:  
a resistive voltage divider providing said first fixed differentiation cue.

Claim 33 (currently amended): The communication system of Claim [[7]] 32, wherein said first differentiation block being defined as being coupled to said first audio input and providing said fixed first differentiation cue to said first audio input to create said first right channel and said first left channel; and

wherein said second differentiation block being defined as being coupled to said second audio input and providing only said fixed second differentiation cue to said second audio input to create said second right channel and said second left channel; and

wherein said resistive voltage divider provides an amplitude difference of at least about 3 dB between the left channel output and the right channel output.

Claim 34 (previously presented): The method for listening to simultaneous audio signals of Claim 24, wherein said first differentiation cue being defined as being in the form of a differential frequency gain.

Claim 35 (previously presented): The method for listening to simultaneous audio signals of Claim 24, wherein said step of receiving said second audio signal being defined as receiving said second audio signal in the form of a second radio broadcast or intercom from a second source.